Sinusitis—Child

Acute sinusitis, the uncomplicated inflammation or swelling of normally air-filled spaces of the skull surrounding the nose (paranasal sinuses), is common in children. Sinusitis may be caused by a virus, bacteria, or fungus. Imaging tests are not recommended for children with acute sinusitis because diagnosis and treatment are based on clinical findings.

If sinusitis does not improve, gets worse even with treatment, or happens when a child is very ill with acute disease, imaging may be needed. CT scan (https://www.radiologyinfo.org/en/info/sinusct) without intravenous (IV) contrast is the best way to examine paranasal sinus anatomy or complications of sinusitis. This test may be used to help plan for paranasal sinus surgery.

CT of the paranasal sinuses with IV contrast is recommended when complications of sinusitis are thought to extend to the eye sockets (orbits), skull, or brain MRI (https://www.radiologyinfo.org/en/info/mri-brain) without and with IV contrast may be needed when meningitis, an infection that goes into the brain, is a probable diagnosis. Sometimes paranasal sinus infections cause problems with the blood vessels of the base of the skull. CT (https://www.radiologyinfo.org/en/info/angioct) or MR angiography (https://www.radiologyinfo.org/en/info/angiomr) and venography (https://www.radiologyinfo.org/en/info/venography) are helpful to diagnose involvement of these arteries and veins.

Children with compromised immune systems, especially those with cancers of the blood, are prone to acute and invasive fungal paranasal sinus infection. In these cases, CT (https://www.radiologyinfo.org/en/info/headct) and MRI (https://www.radiologyinfo.org/en/info/mri-brain) of the head and paranasal sinuses without and with IV contrast are the most appropriate imaging examinations.

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